

What is claimed is:

1. A channel system for microfluidic flow having at least three fluidic connections through which a fluid can flow in or out, the system comprising

a first body having at least two surfaces, a second body having at least two surfaces, and a third body having at least two surfaces,

wherein the first body is joined to the second body by a first means such that a first channel is formed between a first surface of each of the first and second bodies and wherein the first channel is fluidically sealed on two edges and has a defined width or distance between the two first surfaces and a defined depth, and

wherein the third body is joined to the first and second bodies by a second means such that a second channel is formed between a first surface of the third body and a second surface of the first and second bodies, wherein the channel is fluidically sealed on two edges and has a defined width and depth, and further wherein the second channel crosses the first channel, thereby providing a system having three fluidic connections, characterized in that the width each channel is less than 1 mm and the ratio of the depth to width of at least one of the channels is greater than 3.
2. The channel system of claim 1 wherein the depth of the first or second channel is greater than 1 cm.
3. The channel system of claim 1 wherein one of the joining means is a joining element.
4. The channel system of claim 3 wherein the joining element comprises an adhesive.
5. The channel system of claim 3 wherein the joining element comprises a foil.
6. The channel system of claim 3 wherein the joining element is removed after the bodies have been joined.

7. The channel system of claim 1 wherein the second channel crossing the first channel essentially forms a T.
8. The channel system of claim 1 wherein the second channel crossing the first channel essentially forms a Y.
9. The channel system of claim 1 wherein the second channel crossing the first channel essentially forms a cross.
10. The channel system of claim 1 wherein at least one of the channels contains a separation medium.
11. The channel system of claim 1 wherein at least one of the bodies comprises means for regulating temperature of the body.
12. A process for producing a channel system for microfluidic flow having at least three fluidic connections through which a fluid can flow in or out, the system comprising

joining a first body having at least two surfaces to a second body having at least two surfaces by a first means whereby a first channel is formed between a first surface of each of the first and second bodies and wherein the first channel is fluidically sealed on two edges and has a defined width or distance between the two first surfaces and a defined depth, and

joining a third body to the first and second bodies by a second means such that a second channel is formed between a first surface of the third body and a second surface of the first and second bodies, wherein the channel is fluidically sealed on two edges and has a defined width and depth, and further wherein the second channel crosses the first channel, thereby providing a system having three fluidic connections, characterized in that the width each channel is less than 1 mm and the ratio of the depth to width of at least one of the channels is greater than 3.

13. The process of claim 12 wherein the depth of the first or second channel is greater than 1 cm.

14. The process of claim 12 wherein one of the joining means is a joining element.
15. The process of claim 14 wherein the joining element comprises an adhesive.
16. The process of claim 14 wherein the joining element comprises a foil.
17. The process of claim 14 wherein the joining element is removed after the bodies have been joined.
18. The process of claim 12 wherein the second channel crossing the first channel essentially forms a T.
19. The process of claim 12 wherein the second channel crossing the first channel essentially forms a Y.
20. The process of claim 12 wherein the second channel crossing the first channel essentially forms a cross.
21. The process of claim 12 wherein at least one of the channels contains a separation medium.
22. The process of claim 12 wherein at least one of the bodies comprises means for regulating temperature of the body.